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National Bicycling and Walking Study Five Year Status Report by the U.S. Department of Transportation

April 22, 1999

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Introduction and Background

In 1990, Federal Highway Administrator Dr. Tom Larson described bicycling and walking as "the forgotten modes" of transportation. For most of the preceding decade, these two nonmotorized transportation options had been largely overlooked by Federal, State and local transportation agencies. An average of just \$2 million of Federal transportation funds were spent each year on bicycle and pedestrian projects, and the percentage of commuting trips made by bicycling and walking fell from a combined 6.7 percent to 4.4 percent. (1980 and 1990 U.S. Census data).

In the same year, the U.S. Department of Transportation adopted a new national transportation policy that, for the first time, specifically sought to "increase use of bicycling, and encourage planners and engineers to accommodate bicycle and pedestrian needs in designing transportation facilities for urban and suburban areas", and to "increase pedestrian safety through public information and improved crosswalk design, signaling, school crossings, and sidewalks."Years of neglect of bicycling and walking were about to come to an end.

The U.S. Congress wanted to know how the USDOT proposed to increase bicycling and walking while improving the safety of the two modes, and in fiscal year 1991 appropriated \$1 million to complete the *National Bicycling and Walking Study* (NBWS). The legislation outlined five specific tasks:

1. Determine current levels of bicycling and walking and identify reasons why they are not better used as a means of transportation.
2. Develop a plan for increased use and enhanced safety of these modes and identify the resources necessary to implement and achieve this plan.
3. Determine the full costs and benefits of promoting bicycling and walking in urban and suburban areas.
4. Review and evaluate the success of promotion programs around the world to determine their applicability to the role required of the U.S. Department of Transportation to implement a successful program.

5. Develop an action plan, including timetable and budget, for implementation of such Federal transportation policy.

Throughout 1991, input for the study was gathered from a wide variety of sources including staff from the modal administrations within the USDOT, agency field staff, State and local bicycle and pedestrian coordinators, a group of national experts, and from the general public. A *Federal Register* notice published in February 1991, generated more than 500 comments which were almost all strongly supportive of efforts to improve conditions for bicycling and walking.

In 1992, a series of 24 case studies was commissioned to investigate different aspects of the bicycling and walking issue. These reports gathered a wealth of information on bicycling and walking from around the world and provided a snapshot of the state of bicycling and walking in the United States in the early 1990s. The studies also highlighted information gaps, identified common obstacles and challenges to improving conditions for the nonmotorized traveler, and suggested possible activities and a leadership role for the USDOT.

On April 22, 1994, the Federal Highway Administrator and National Highway Traffic Safety Administrator walked the final report of the National Bicycling and Walking Study from the Department of Transportation to the U.S. Congress. The study contained two overall goals:

- to double the percentage of total trips made by bicycling and walking in the United States from 7.9 percent to 15.8 percent of all travel trips; and
- to simultaneously reduce by 10 percent the number of bicyclists and pedestrians killed or injured in traffic crashes.

In addition to these goals, the Study identified a 9-point Federal Action Plan with 60 specific action items for the Office of the Secretary, Federal Highway Administration, National Highway Traffic Safety Administration and Federal Transit Administration; and a 5-point State and Local Action Plan with a range of suggested activities for State and local agencies.

The purpose of this report is to document what happened in respect to these goals and action plans in the five years since the Study was released. Chapter 2 provides an overview of progress towards the two national goals and the Federal, State and local action plans. Chapter 3 discusses the status of bicycling and walking within the Department of Transportation five years after the release of this landmark study. Chapter 4 identifies conclusions and recommendations for action that can reinvigorate the Department's commitment to achieving the overall goals of the study. A detailed assessment of how the Department has responded to each of the 60 action items in the 9-point Federal Action Plan is provided in Appendix 1.



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Chapter 2

Assessing the Impact of the National Bicycling and Walking Study

The National Bicycling and Walking Study was a landmark report that ushered in a period of unparalleled progress for bicycling and walking issues. Soon after Congress commissioned the Study, they also passed the Intermodal Surface Transportation Efficiency Act (1991) which opened up billions of dollars of transportation funds for bicycling and walking improvements. Spending of Federal transportation funds on these two modes rose from \$6 million in 1990 to more than \$238 million in 1997.

Many States and localities rediscovered bicycling and walking in the 1990s, and began devoting staff and financial resources to the creation of a more bicycle-friendly and walkable infrastructure. Buoyed by ISTEA and the National Bicycling and Walking Study (NBWS), the number of bicycling and walking professionals has grown to the point that they have established their own professional association with more than 250 members - in 1990 only a handful of States and cities had bicycle coordinators and none had a pedestrian coordinator.

The National Bicycling and Walking Study also stands out as the first time the Federal government has ever committed itself to modal split targets, i.e. achieving a certain percentage of trips by specified modes. This lead has since been followed in the both the United Kingdom and Australia.

The coupling of an increase in use with a simultaneous reduction in fatalities and injuries created a unique target which challenged the conventional wisdom that

increasing use would increase crashes. Equally important, the twin goals were designed to ensure that gains in the apparent safety of the two modes were not achieved by discouraging use.

Implementing the National Study was also made more challenging by the changing role of the Federal government in the early 1990s. ISTEA and other trends of the day were reducing the ability and desire of the Federal government to mandate specific actions or to direct funding towards specific projects. States and local governments were gaining significantly more control over transportation planning, funding, and decisionmaking than had been the case previously.

Therefore, in writing the National Study the USDOT had to identify an appropriate role to play in encouraging and promoting the two goals without requiring specific actions at the State and local level, even though many of the improvements necessary to achieve the goals had to be made at the State and local level. The result was the adoption of a 9-point Federal Action Plan with 60 specific action items and a 5-point Recommended Action Plan for both State and local government agencies.

Doubling the percentage of trips made by bicycling and walking

The National Bicycling and Walking Study (NBWS) target of doubling the percentage of trips made by bicycling and walking from 7.9 percent to 15.8 percent was based on numbers collected in the 1990 Nationwide Personal Transportation Survey (NPTS). In 1990, a total of 18 billion walking trips and 1.7 billion bicycling trips were made representing 7.2 percent and 0.7 percent respectively of all trips counted by the study.

The NPTS was repeated in 1995, approximately one year after the release of the NBWS. The number of walking trips had increased to 20 billion but this figure was just five percent of total trips; bicycling trips increased to more than 3 billion, and were still less than one percent of all trips.

While this was much too soon after the release of the study to offer any real indication of progress (or failure) towards the goal of increasing use, the 1995 survey numbers do provide critical information on the challenges faced in meeting this target:

- While the number of both bicycling and walking trips increased (by 89 percent and 13 percent respectively) there was a simultaneous increase in the total number of trips by all modes of more than 50 percent. Increasing the percentage of overall trips made by bicycling and walking is going to be a tough challenge if the level of overall travel continues to increase at this rate.
- The survey methodology changed between the 1990 and 1995 survey from a telephone survey to a travel diary survey. This resulted in an increase in the reported number of trips overall.
- The NPTS only provides a national picture and is hard to relate to the State or local level. By contrast, the decennial U.S. Census (which shows 4.4 percent of journeys to work are made by foot or bicycle) information is available by census tract. However, the NPTS shows that only one in five trips are journeys to work. Thus, it is hard for any State or locality to accurately gauge how it is faring.

The next NPTS (and U.S. Census) is scheduled for the year 2000 and the results will likely be available in 2002 at the earliest. At that time, we will be able to provide a better assessment of the impact of the NBWS on the levels of bicycling and walking in the United States. Until then, there is insufficient information available on which to gauge progress on meeting the goal of doubling the percentage of trips made by bicycling and walking.

Reducing fatalities and injuries suffered by bicyclists and pedestrians

Progress towards the second goal of reducing fatalities and injuries suffered by bicyclists and pedestrians by 10 percent is more easily gauged as crash statistics are collected annually.

In 1993, the last year prior to the release of the NBWS, 5,649 pedestrians and 816 bicyclists were killed in collisions with motor vehicles. In 1997, the last year for which data is available, these numbers had fallen to 5,307 and 813 respectively. While the pedestrian figures have shown a reasonably steady decline, the bicycle fatality number has been as high as 833 in 1995 and as low as 765 in the following year. These numbers reflect a 6 percent fall in pedestrian fatalities and a less than one percent fall in bicycle fatalities.

Over the same period, the number of pedestrians injured in collisions with motor vehicles fell from 94,000 to 77,000 (18 percent) and the number of bicyclists injured in collisions with motor vehicles fell from 68,000 to 58,000 (15 percent). Bicyclists and pedestrians represented more than 16 percent of all traffic fatalities in 1993 and 14.5 percent in 1997 - in addition to the fall in bicycle and pedestrian crashes over this time, there was also an increase in overall traffic fatalities of almost 5 percent.

The fall in pedestrian fatalities and in injuries suffered by bicyclists and pedestrians is close to the target set by the NBWS. There has been little progress towards the target of reducing bicyclist fatalities.

Progress on the Federal Action Plan

The role of the Federal government in implementing the NBWS was defined in an ambitious 9-point Federal Action Plan that identified 60 specific action items to be carried out by the U.S. Department of Transportation. Responsibility for each of the action items was assigned to at least one of the modal administrations within DOT (e.g. FHWA, NHTSA, FTA, or OST).

Action has been taken on more than 50 of the 60 items, and while many of the items are ongoing more than one quarter of the items can reasonably be said to be complete. There are only eight items where no identifiable action has yet been taken and in at least two of these USDOT has either no responsibility for the specific action or the action has been performed by other agencies and no longer requires USDOT action. A full assessment of the actions taken under each item is provided in Appendix 1.

The final action item adopted in the NBWS was for the USDOT to serve as a positive national presence and role model in relation to bicycling and walking. Through its work in implementing the overwhelming majority of the Federal Action Plan, USDOT has clearly shown States and local governments the kind of leadership, direction, encouragement, and support for bicycling and walking that was intended.

In particular, USDOT can be proud of its accomplishments in five key areas:

a) Publications. In the five years since the study was released, USDOT has produced a wealth of literature - research reports, fact sheets, manuals, brochures, training materials, etc - on all aspects of improving conditions for bicycling and walking. A separate list of publications is provided in Appendix 2. These publications have enabled State and local government agencies and advocacy groups to ensure the design and planning of a more walkable and bicycle-friendly infrastructure, stage successful safety events and training courses, enforce safe road user behavior, combine transit with bicycling and walking, promote public involvement in the transportation planning process, reach new constituencies with important safety messages, and inform planners, engineers, safety experts, accessibility advocates and the public about bicycling and walking issues.

b) Research and Technology Transfer. USDOT has undertaken a comprehensive multi-year bicycle and pedestrian research program that includes original research, project evaluations, several syntheses of existing research work in critical areas (including some foreign experience), training courses to disseminate research findings, awareness campaigns, and other activities designed to apply existing knowledge in the field. A summary of research topics covered during the past five years is provided in Appendix 3. The research and technology transfer program has addressed many of the issues identified in the NBWS Federal Action Plan including studies of crash types and countermeasures, innovative intersection designs to accommodate bicyclists and pedestrians, and methods to estimate travel behavior by bicyclists and pedestrians.

c) Outreach and Partnerships. Recognizing that improvements for bicycling and walking will only come about with the concerted and combined efforts of many agencies and interested parties, USDOT has actively sought to partner with a wide range of groups and other agencies. USDOT has developed a strong relationship with the State bicycle and pedestrian coordinators and has worked with the American Association of State Highway and Transportation Officials (AASHTO) and the Institute of Transportation Engineers (ITE) on specific projects. There has been improved collaboration between modal administrations within the USDOT (e.g. working with the Federal Railroad Administration for the first time) and between the USDOT and other Federal agencies through regular meetings and joint projects. The USDOT has successfully used printed materials, the internet, training courses, clearinghouses, conferences, events, and other media to effectively disseminate information about bicycling and walking to a diverse audience.

d) Increased Attention to Pedestrian Issues. Actions taken in response to the Federal Action Plan have substantially boosted the level of attention paid to walking

issues by both the USDOT and State and local agencies. Through a range of activities such as the development of a Pedestrian Safety Roadshow, support for the Walk Your Children to School Week event, publication of Spanish-language pedestrian safety materials, and collaboration with the health promotion and injury prevention communities, the awareness of pedestrian issues is higher than at any time in the past three decades. There has also been an increased emphasis on issues affecting access to the transportation system for people with disabilities.

e) Increased Funding for Bicycling and Walking Projects. While the most significant recent increase in funding for bicycling and walking projects occurred with the passage of ISTEA in 1991, actions taken by USDOT in response to the Federal Action Plan have contributed to continuing record levels of spending on bicycling and walking initiatives across all the various funding categories administered by USDOT.

While USDOT can be justifiably proud of these and many other accomplishments in the bicycle and pedestrian arena during the past five years, there are still a number of items on the Federal Action Plan that have not been addressed, or where important work still remains necessary.

These items include:

- updating the Code of Federal Regulations (CFR) to reflect the changes made by TEA-21 and ISTEA
- undertaking research and offering guidance on the air quality and congestion relief impacts on investments in bicycling and walking infrastructure and promotions
- promoting the integration of bicycling and walking with transit directly to the transit operators through training, publications and encouragement
- developing a stronger relationship with USDOT field staff
- including bicycle and pedestrian considerations in the core internal planning and operations documents of the USDOT (e.g. strategic plans and performance measure plans)
- collecting and analyzing bicycle and pedestrian use and exposure data to help determine the effectiveness of safety countermeasures and other actions
- providing training and technical assistance on designing accessible sidewalks and trails
- encouraging and assisting States and MPOs to more speedily implement bicycle and pedestrian projects using Federal transportation funds
- identifying more research opportunities within the Department to meet ongoing and future research needs in the bicycle and pedestrian area
- conducting research into promoting the use of bicycling and walking and measuring the effectiveness of such programs

Progress on the Recommended State and Local Action Plan

The Federal role in State and local transportation decision-making has been diminishing throughout the 1990s. However, because most decisions affecting the safety and comfort of bicyclists and pedestrians are made at these levels of government, the NBWS provides some guidance and encouragement to States and localities as to the ways in which they could improve conditions for the nonmotorized traveler.

Based on input from State and local bicycle and pedestrian coordinators, and the findings of a number of case studies developed as part of the NBWS, the Study outlined a 5-point Recommended Action Plan (RAP) for State and local governments. The final report of the NBWS discussed ways in which each of the five elements of the plan could be implemented, drawing on examples from States and localities that had already made progress in these areas.

USDOT has not undertaken an exhaustive study of State and local government actions in response to the RAP. However, some indication of the State and local response to the study has been gathered from a query posted to State and local bicycle and pedestrian coordinator electronic mailing lists (generating responses from 12 States and a handful of cities), a 1997 synthesis of bicycle and pedestrian planning under ISTEA, and from informal discussions with State and local agency

staff. Based on these sources, a number of observations can be made.

General State and local agency response

Approximately half the States and 10 percent of cities have adopted the overall goals of the NBWS. (The NBWS was released just before the deadline for ISTEA-mandated State and MPO long range transportation plans, making it hard for many agencies to adopt the goals at that time.)

While most States and cities report increased levels of bicycling and walking since 1994, these reports are based on belief rather than actual numbers.

Despite national figures to the contrary, most States and cities contacted report that pedestrian fatalities have not fallen since 1994. Most cities report a fall in bicyclist fatalities.

Action Plan Item 1. Organize a Bicycle/Pedestrian Program

Since 1994, the number of staff (or staff time spent) working on bicycle and pedestrian issues at the State level has more than doubled. There has also been an increase in the number of staff working specifically on bicycle issues at the local level - more so than for pedestrian issues.

Since 1994, approximately half the States and a number of local agencies have established or re-established citizen advisory committees to help guide bicycle and pedestrian program work.

Most State and local agencies report having offered bicycle and pedestrian facility planning and design courses for their staff, usually more than once since 1994. Fewer agencies have offered education and/or enforcement training.

Action Plan Item 2. Plan and Construct Needed Facilities

Approximately half the States report that bicycle and pedestrian facilities are now included in some or most highway projects; the remaining States usually develop bicycle and pedestrian facilities as separate or independent projects. Less than half the States have separate bicycle and pedestrian design manuals.

Most States report having an overall long range transportation plan that integrates bicycling and walking; one-third have a separate long range plan for bicycling and walking.

Action Plan Item 3. Promote Bicycling and Walking

Most States and local governments report publishing supportive literature (maps, brochures, etc), and more than half promote or organize events such as bike-to-work day.

Action Plan Item 4. Educate Bicyclists, Pedestrians, and the Public

Most States and localities have produced bicycle and pedestrian safety literature; local agencies are more likely to have also provided training to children on safe walking and bicycling.

Action Plan Item 5. Enforce Laws and Regulations

Few States and localities report action in this area; some have revised their vehicle codes and/or drivers manuals since 1994 to better address bicycling and walking issues, a handful of others have passed child helmet laws for bicyclists.



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Chapter 3

Status of Bicycling and Walking Within USDOT

Staffing:

There can be little question that the treatment of bicycling and walking issues within the Department of Transportation has advanced considerably since the start of the 1990s. When Congress commissioned the National Bicycling and Walking Study (NBWS) in 1990, there were no more than one or two USDOT headquarters staff working full-time on bicycle and pedestrian issues, and fewer than five with any part-time responsibility for them. Today there are approximately ten full-time and ten part-time staff within the agency with responsibility for bicycling and walking, as well as a dozen or more staff who are regularly involved in bicycle and pedestrian issues. A monthly meeting of USDOT staff in this area regularly attracts people from the Office of the Secretary, Federal Highway Administration, Federal Transit Administration, National Highway Traffic Safety Administration, and Federal Railroad Administration. The bicycle and pedestrian responsibilities of these staff range from programmatic activities to research, technology transfer, and policy development.

The impressive work of the USDOT in implementing an ambitious Federal Action Plan, as documented in this report, has been achieved with a limited commitment of staff and resources in relation to the size of the task. In order to complete tasks from the NBWS Federal Action Plan, provide ongoing leadership and support to States and local governments, and meet the challenging goals of the NBWS, USDOT must effectively prioritize its work and make the most of ongoing program and research activities.

Visible and vocal support from senior USDOT officials is necessary to reiterate that bicycling and walking issues are a critical part of the mission of the agency and that everyone within the agency - not just those working full-time of bicycling and walking issues - has responsibility to address the safety and accessibility of bicyclists and pedestrians.

Safety:

The downward trend in pedestrian fatalities and injuries and the decline in bicyclist injuries during the past five years are certainly encouraging signs, as is the renewed commitment to traffic safety within USDOT in general and FHWA and NHTSA in particular. Safety is one of the top priorities of the Department, and has been described by the Secretary as the "North Star" of the Department, guiding its every move.

However, without reliable data on levels of bicycle and pedestrian activity and exposure, the enthusiasm for reported crash reductions involving bicyclists and pedestrians must be tempered by the possibility that the relative danger of the two modes may still be increasing even though fatality and injury numbers are falling.

USDOT must balance the need to focus safety efforts on "high profile" safety issues (i.e. major train, truck or plane crashes) with the everyday safety of the pedestrian and bicyclist. Despite crash reductions in recent years, bicyclists and pedestrians remain over-represented in crash statistics, accounting for almost 15 percent of all fatalities but only 7 percent of trips and an even smaller percentage of total miles traveled.

With passage of TEA-21, USDOT has an opportunity to better incorporate pedestrian and bicycle safety into its safety construction programs and activities.

Funding:

Clearly there has been a major increase in funding opportunities for bicycling and walking improvements that has resulted in spending on projects to benefit the two modes growing from approximately \$6 million in 1990 to more than \$238 million in 1997. In 1999, virtually all the major transportation funding programs explicitly can be used for bicycle and pedestrian activities without any limit on the amount of available funds. By contrast, in 1990, many of the Federal-aid funding programs were closed to bicycle and pedestrian improvements and no State was allowed to spend more than \$4.5 million in any one year on independent bicycle and pedestrian projects.

Despite this remarkable change, expenditures on bicycling and walking are still approximately one percent of total transportation spending. Much of the ongoing spending on transportation infrastructure should take into account the needs of pedestrians and bicyclists, especially as approximately one third of the population of the United States is unable to drive.

Overall Status:

USDOT is supportive of bicycling and walking and has made great progress in addressing the needs of the two modes and there is certainly a much greater awareness of bicycling and walking issues compared to a decade ago. However, there is still much progress to be made in making the nonmotorized modes a routine part of the everyday activities of the Department. The final chapter of this report identifies a number of key action items that are necessary to elevate bicycling and walking to the point that they become a visible, mainstream part of the policy, programs, and projects of the agency.



Chapter 4

Conclusions and Recommendations

In the five years since the National Bicycling and Walking Study (NBWS) was released, bicycling and walking issues have become more a part of the day to day activities of Federal, State, and local transportation agencies in the United States and some progress has been made towards the twin goals of increasing use while improving the safety of the two modes.

The United States Department of Transportation has acted on most of the 60 items contained in the NBWS Federal Action Plan and has played a significant role in encouraging and enabling State and local governments to implement various elements of the NBWS Recommended Action Plan for State and Local Government.

However, to achieve the specific goals of the study and to realize the vision of "a nation of travelers with new opportunities to walk or ride a bicycle as part of their everyday life"(NBWS), the USDOT must renew its commitment to elevating bicycling and walking to become part of the transportation mainstream.

The Secretary of Transportation is urged to renew the Administration's commitment to achieving the goals of the NBWS, and to identify from the list below a number of specific tasks to be completed or substantially completed by the end of 1999.

Specifically, within 90 days the agency should initiate the development of a strategic plan for achieving the goals of the NBWS that is integrated into the ongoing work of the Department and addresses the following critical needs:

1. Better Document Bicycling and Walking Activity

- develop a method of accurately recording bicycle and pedestrian trips
- develop a method to measure and track bicyclist and pedestrian exposure rates
- measure and track bicycle helmet use rates
- capture expenditure information for bicycle and pedestrian projects and programs
- improve the survey instrument for the 2000 Nationwide Personal Transportation Survey to generate better data on bicycle and pedestrian activity and provide a detailed analysis of the results
- determine the impact of bicycle and pedestrian investments on air quality, public health, and other quality of life indicators

2. Improve Internal Support and Commitment to Bicycling and Walking

- complete the unfinished action items in the Federal Action Plan of the NBWS
- include bicycle and pedestrian goals in the next USDOT Strategic Plan
- incorporate bicycle and pedestrian measures into each modal administration's annual performance plans
- integrate bicycling and walking into all appropriate administration initiatives such as the Livability Initiative; include specific action items to improve conditions for bicycling and walking within such initiatives
- promote greater awareness of pedestrian accessibility issues
- develop and implement a strategy for improving the ability of USDOT HQ and field staff to address bicycle and pedestrian issues as part of their everyday functions
- integrate bicycle- and pedestrian-related activities into the research agenda of the various modal administrations and business units within each agency (to diversify funding sources and broaden the scope of research to more than safety issues)
- promote administration support for bicycling and walking to non-bicycling and walking audiences.

3. Improve External Awareness and Support for Bicycling and Walking

- actively promote a "share the road" philosophy among all road users that stresses the importance and vulnerability of bicyclists and pedestrians
- actively promote and reward communities that adopt land use and development policies that create more bicycle-friendly and walkable communities
- promote training on accessible sidewalk design
- implement and evaluate a national marketing campaign to encourage people to walk and bicycle more often
- promote campaigns that target driving behavior (e.g. speeding, signal violations, aggressive driving) that particularly endangers bicyclists and pedestrians
- explore opportunities for new technologies (e.g. ITS products) to be deployed for the benefit of bicyclists and pedestrians

The opening sentence of this report recalled a 1990 statement by the FHWA Administrator that bicycling and walking were the "forgotten modes." It is perhaps a measure of how far the USDOT as whole has come that in 1999 the FHWA Administrator wrote that, "we expect every transportation agency to make accommodation for bicycling and walking a routine part of their planning, design, construction, operations and maintenance activities." With another decade of progress, USDOT can achieve the goals of the National Bicycling and Walking Study.

"Bicycling and walking can then become attractive options and valuable components within our Nation's transportation system." (NBWS, 1994)



APPENDIX 1

National Bicycling and Walking Study

The Federal Action Plan

Action Item 1

Provide technical guidance in the interpretation of national transportation legislation and distribute other technical information.

Action Item 2

Fully integrate consideration of bicyclist and pedestrian needs into planning; design; operational policies and procedures; and suggested usage, accident rate, and evaluation methodologies.

Action Item 3

Provide funding for a bicycle and pedestrian friendly infrastructure that includes new facilities and infrastructure retrofitting and education for all road users, and enforcement programs for all road users.

Action Item 4

Provide initial and continuing education and training for planning and engineering professionals which encourages routine consideration of the needs of bicyclists and pedestrians.

Action Item 5

Conduct promotional and awareness activities, both to increase the level of bicycling and walking for all trip purposes and to legitimize these travel modes within the transportation system.

Action Item 6

Carry out activities that increase the safety of bicycling and walking.

Action Item 7

Provide outreach to other government agencies and develop new public/private partnerships to safely increase bicycling and walking usage levels.

Action Item 8

Conduct research and develop effective methods of technology transfer.

Action Item 9

Serve as positive national presence and role model.

Action Item 10

Provide technical guidance in the interpretation of national transportation legislation and distribute other technical information.

1. Develop guidance and regulations as required to implement the bicycle and pedestrian provisions of ISTEA, including information on funding sources, State and MPO planning requirements, and the State DOT bicycle and pedestrian coordinator positions (FHWA).
2. Develop guidance as needed on the use of bicycle and pedestrian programs to met the goals of the Clean Air Act Amendments. (OST, FHWA)
3. Distribute the findings of the National Bicycling and Walking Study and develop an implementation plan for carrying out the Federal action items. (OST, FHWA, NHTSA, FTA)
4. Develop and distribute a brochure describing and promoting opportunities in the FTA program for bicycle and pedestrian projects. (FTA)
5. Assimilate other technical information and distribute it as appropriate. (OST, FHWA, NHTSA, FTA)

6. Conduct briefings for field, State and local offices on bicycle and pedestrian program issues. (FHWA, NHTSA, FTA)

7. Provide materials on bicycle and pedestrian issues to national organizations

USDOT Response to Action Item 1

1. Develop guidance and regulations as required to implement the bicycle and pedestrian provisions of ISTEA, including information on funding sources, State and MPO planning requirements, and the State DOT bicycle and pedestrian coordinator positions (FHWA).

Actions: USDOT has

- Issued interim guidance on *Bicycle and Pedestrian Planning at the State and MPO level under the Intermodal Surface Transportation Efficiency Act* (1994).
- Delivered ten 1-day workshops on *"Bicycle and Pedestrian Planning Under ISTEA"* through the National Highway Institute (1994-1995).
- Published a *"Synthesis of Bicycle and Pedestrian Planning Under ISTEA"* (1998).
- Published the *"Bicycle and Pedestrian Provisions of the Federal-aid System"* brochure (1998).
- Issued program guidance on the *Bicycle and Pedestrian Provisions of the Federal Transportation Program* (1999) which details all the major funding sources available for bicycle and pedestrian projects.
- Issued program guidance on the Recreational Trails Program (1995, 1996/97, 1999).
- Delivered numerous ISTEA/TEA-21 presentations to workshops, conferences, and other events over the past five years.

USDOT still needs to:

- Update the 1992 guidance on the role and functions of the State bicycle and pedestrian coordinator position.
- Update 23 CFR Part 652-Pedestrian and Bicycle Accommodations and Projects (the Code of Federal Regulations) to reflect the changes made by ISTEA and TEA-21.
- Provide more guidance to FHWA Division staff, States, MPOs, and Federal Lands Highway offices on ways to integrate bicycle and pedestrian programs within their existing activities.

2. Develop guidance as needed on the use of bicycle and pedestrian programs to meet the goals of the Clean Air Act Amendments. (OST, FHWA)

Actions: USDOT has

- Included bicycle and pedestrian information in FHWA program guidance on the Congestion Mitigation and Air Quality Improvement (CMAQ) program (1996, 1999).
- Included case studies of bicycle and pedestrian projects in a variety of CMAQ publications including an interactive display unit featuring the CMAQ program.

USDOT still needs to:

- Complete research and offer guidance on quantifying the air quality and congestion relief impacts of investments in bicycle and pedestrian infrastructure and promotions.

3. Distribute the findings of the National Bicycling and Walking Study (NBWS) and develop an implementation plan for carrying out the Federal action items. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Distributed approximately 25,000 copies of the NBWS Final Report; 10,000 copies of the Executive Summary and more than 15,000 copies of the 24 case studies.
- Presented the findings of the NBWS to international conferences in Basel (Switzerland), and Perth (Australia); national conferences in Oregon, Maine, Florida, the District of Columbia; and numerous State and local events throughout the country.
- Issued a One Year Progress Report (1995).

USDOT still needs to:

- Collaborate more effectively within DOT and other Federal agencies to plan and implement the remaining action items in the National Study.
- Continue integrating the goals of the study into DOT programs and transportation plans at the State and MPO level.

4. Develop and distribute a brochure describing and promoting opportunities in the FTA program for bicycle and pedestrian projects. (FTA)

Actions: USDOT has

- Published *Bicycles and Transit: A Partnership that Works* (1998).
- Published *Improving Pedestrian Access to Transit: An Advocacy Handbook* (1998).

USDOT still needs to:

- Implement an outreach program to transit operators to assist them in developing bicycle- and pedestrian-friendly policies, projects, and programs.
- Adopt a similar approach with the Federal Railroad Administration.

5. Assimilate other technical information and distribute it as appropriate. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Published a wide variety of reports and other resources based on FHWA and NHTSA research, State and local best practices, and international experience (see Appendix 2).
- Initiated publication of two resource manuals detailing how State and local agencies should develop sidewalks and trails to meet the requirements of the Americans with Disabilities Act (due in 1999).
- Worked closely with the American Association of State Highway and Transportation Officials (AASHTO), the National Committee on Uniform Traffic Control Devices and the National Committee on Uniform Traffic Laws and Ordinances to update the bicycle and pedestrian sections of key documents; and initiated a 1-day training workshop to update bicycle and pedestrian professionals on these various changes.
- Worked in partnership with the Consumer Product Safety Council to publicize new bicycle helmet standards (March 1999).

6. Conduct briefings for field, State and local offices on bicycle and pedestrian program issues. (FHWA, NHTSA, FTA)

Actions: USDOT has

- Made presentations on bicycle and pedestrian program issues in many States including AZ, CA, CO, DC, FL, GA, IA, IL, IN, ME, NY, OR, RI, SC, TX, WA.
- Organized annual meetings of the State Bicycle and Pedestrian Coordinators, to which FHWA and NHTSA headquarters and field staff are invited.
- Initiated a series of State-level meetings between all those involved in implementing bicycle and pedestrian projects through TEA-21 (including FHWA Division Offices, Governors Highway Safety Representatives, Bicycle and Pedestrian Coordinators, Transportation Enhancement Coordinators, advocacy groups, and others).

USDOT still needs to:

- Better train and work with USDOT field staff to ensure that they are able to address the needs of bicyclists and pedestrians.

7. Provide materials on bicycle and pedestrian issues to national organizations**Actions: USDOT has**

- Made a wide array of publications (Publications List in Appendix 2) and other resources available to a diverse and growing number national organizations. Notable projects include:
 - creation of Pedestrian and Bicycle Crash Analysis Tool (PBCAT) software to assist State and local government record keeping and problem identification;
 - publication of a Bike to Work Day manual for the annual Washington DC event sponsored by the Washington Area Bicyclists Association;
 - a comprehensive Bicycle Safety Tool Kit, with an emphasis on safety materials, which will soon be complemented by a pedestrian equivalent;
 - compilation of a Pedestrian Reference Set to augment information available to communities wanting to improve walking conditions
 - publication of a Spanish- and English-language Walkability Checklist to help people identify pedestrian issues in their neighborhood
 - a series of Spanish-language materials to address older adult and child pedestrian safety issues
- Established the National Bicycle and Pedestrian Clearinghouse to facilitate distribution of materials on bicycle and pedestrian issues to national organizations (1994-1998).
- Distributed pedestrian and bicycle safety materials to diverse organizations such as the American Public Health Association, General Federation of Women's Clubs, Emergency Nurses Association, National Association of City and County Health Officials, National SAFE KIDS Campaign, Centers for Disease Control and Prevention, Maternal and Child Health Bureau, Coalition of Hispanic Health Organizations, and many more.

Action Item 2.

Fully integrate consideration of bicyclist and pedestrian needs into planning; design; operational policies and procedures; and suggested usage, accident rate, and evaluation methodologies.

1. As appropriate, include consideration of bicyclist and pedestrian needs into revisions of DOT policies and procedures. (OST, FHWA, NHTSA, FTA)
2. Distribute the revised policies and procedures to field offices. (FHWA, NHTSA, FTA)

3. Coordinate bicycle and pedestrian efforts with the Office of Intermodalism and with the Bureau of Transportation Statistics. (OST, FHWA, NHTSA, FTA)
4. Encourage AASHTO to incorporate appropriate criteria for accommodation of bicyclists and pedestrians into their design, construction policies, standards and guides. (FHWA)
5. Recommend revisions to the "Manual of Uniform Traffic Control Devices" and the "Highway Capacity Manual" to ensure appropriate consideration of bicyclists and pedestrians. (FHWA)
6. Encourage the revision of State and local planning and design policies and procedures to include consideration of bicyclists and pedestrians as appropriate. (FHWA)
7. Encourage and publicize intermodal projects which include bicycle and/or pedestrian components. (OST, FHWA, NHTSA, FTA)
8. Encourage State safety offices to include consideration of bicyclists and pedestrians into their policies and procedures. (FHWA, NHTSA)
9. Investigate the collection of use, crash/accident rate, and evaluation data. Develop and test model usage, crash/accident rate, and evaluation methodologies and encourage their use by State and local officials. Assimilate and distribute this information. (OST, FHWA, NHTSA, FTA)
10. Develop prototype seating configurations and hardware to accommodate bicycles on commuter and intercity rail and bus lines. (FTA)
11. Encourage liberalized policies by Amtrak for bicycle carriage on rail. (FTA)

USDOT Response to Action Item 2.

1. As appropriate, include consideration of bicyclist and pedestrian needs into revisions of DOT policies and procedures. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Ensured that the USDOT proposal for the successor to ISTEA (known as NEXTEA), fully integrated bicycle and pedestrian elements, including continued eligibility for major funding programs and inclusion in the planning process (1997). The eventual law that was passed by Congress, TEA-21, reflected most of these recommendations.
- The *NHTSA Strategic Plan* includes mention of bicycle and pedestrian issues:

"The agency's goal is to reduce the pedestrian fatality rate to 2.0 and the injury rate to 30.6 per 100,000 people by the year 2000. In addition, the DOT seeks to reduce pedestrian and bicycle injuries and fatalities by 10 percent by the year 2000. A combination of public information, enforcement, engineering, and outreach strategies will be used to reach these goals."

NHTSA's goal is to reduce bicyclist fatalities and injuries and increase bicycle helmet usage. The agency will use a combination of public information, legislation, enforcement, engineering, and outreach strategies targeted to both bicyclists and motorists.

- The *FHWA Strategic Plan* includes a brief mention of bicycle and pedestrian issues: "The FHWA, in partnership with the total highway and transportation community, is preparing for the future. Our vision is to create the safest and most efficient and effective highway and intermodal transportation system in the world for the American people--a transportation system where everyone has access within and beyond their community and to the world; a transportation system where crashes, delays, and congestion are significantly reduced; a transportation system where freight moves easily and at the lowest costs across towns, States, and international borders; a system where roads protect ecosystems and where travel on our roadways does not degrade the quality of the air; a system where pedestrians and bicyclists are accommodated; and a system where transportation services are restored immediately after disasters and emergencies."

USDOT still needs to:

- Include bicycle and pedestrian consideration in core internal planning and operations documents such as the US DOT Strategic Plan and the modal administrations' performance measure plans. The current *USDOT Strategic Plan* includes no specific mention of bicycle issues and a passing reference to the safety of elderly pedestrians.
- Improve overall awareness of bicycle and pedestrian issues within the senior levels of the USDOT so that the stated priorities of the agency and modal administrations are translated into actions.

2. Distribute the revised policies and procedures to field offices. (FHWA, NHTSA, FTA)

Actions: USDOT has

- Distributed a series of policy memoranda that highlight the agency's commitment to bicycle and pedestrian issues including a February 26, 1999, policy memorandum from the FHWA Administrator to field offices detailing changes brought about by TEA-21 (1999).

USDOT still needs to:

- Incorporate bicycle and pedestrian issues into the statements of overall policy and procedure of the USDOT so that the issues are integrated into the ongoing activities of transportation agencies.

3. Coordinate bicycle and pedestrian efforts with the Office of Intermodalism and with the Bureau of Transportation Statistics. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Worked with the BTS to develop a needs statement for current research into the availability of bicycle and pedestrian data. (1998)
- Worked with the Office of Intermodalism to develop the Millennium Trails Initiative

4. Encourage AASHTO to incorporate appropriate criteria for accommodation of bicyclists and pedestrians into their design, construction policies, standards and guides. (FHWA)

Actions: USDOT has

- Provided a consultant to collect and assimilate technical comments on the upcoming AASHTO *Guide to the Development of Bicycle Facilities* (1996-1998).
- Worked closely with AASHTO to involve bicycle and pedestrian professionals in the review and re-writing of the *Guide to the Development of Bicycle Facilities*, in particular by soliciting and compiling the comments of the State Bicycle and Pedestrian Coordinators (1996-1998).
- Begun implementing the TEA-21 mandated study to develop guidance on the various approaches to accommodating bicycle and pedestrian travel, in cooperation with AASHTO, ITE, and other interested organizations (1998-1999).
- Designated a staff person to serve on the review panel for an NCHRP research project synthesizing pedestrian design guidelines and standards (1999).

5. Recommend revisions to the *Manual on Uniform Traffic Control Devices* and the *Highway Capacity Manual* to ensure appropriate consideration of bicyclists and pedestrians. (FHWA)

Actions: USDOT has

- Worked closely with the newly-formed National Committee on Uniform Traffic Control Devices Task Force on Bicycling to revise Part IX of the MUTCD.
- Developed a Final Rule for use of the fluorescent yellow-green warning sign (for bicyclists, pedestrians and school zones) and the "Share the Road" warning sign.
- Completed a research project to study and develop necessary changes to the *Highway Capacity Manual*; the research is complete and the changes approved for inclusion in the 2000 edition of the Manual. (1996-1998)

USDOT still needs to:

Include more pedestrian and bicycle-related innovative traffic control devices in the MUTCD, including:

- develop a brochure outlining the MUTCD experimentation and rulemaking processes
- ensure bicyclists and pedestrian interests are considered in all MUTCD rulemaking activities.

6. Encourage the revision of State and local planning and design policies and procedures to include consideration of bicyclists and pedestrians as appropriate. (FHWA)

Actions: USDOT has

- Delivered 40 *Bicycle and Pedestrian Safety and Accommodations* courses through the National Highway Institute (NHI) -- the course includes extensive coverage of design and planning issues (1996-1998).
- Delivered 10 *Bicycle and Pedestrian Planning Under ISTEA* training courses through NHI -- the course includes extensive recommendations on developing a planning process to integrate bicycling and walking (1994-1995).
- Published *Flexibility in Highway Design* -- the book includes discussion of bicycle and pedestrian design issues (1997).
- Published *Implementing Bicycle Improvements at the Local Level* (1998) and drafted a companion pedestrian manual for publication in 1999.

USDOT still needs to:

- Develop and deliver bicycle and pedestrian facility design courses.
- Develop and deliver training on compliance with the Americans with Disabilities Act.

7. Encourage and publicize intermodal projects which include bicycle and/or pedestrian components. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Recognized the Traverse Area Recreational Trail and Wisconsin's Highway 23 Improvement in the *Environmental Excellence* award program (1997).
- Featured numerous intermodal bicycle and pedestrian projects including the Stone Arch Bridge (MN), the Farmington Canal trail (CT), and the Danville Rail Passenger Station (VA) in *"Building on the Past, Traveling to the Future"*, published with the National Trust for Historic Preservation (1995).
- Published *"Improving Conditions for Bicycling and Walking: A Best Practices Report"* which features the I-70 trail (Glenwood Canyon, CO), Long Beach Bikestation, Phoenix Bike on Bus program, Caltrain Bike on Rail program, and many more examples of intermodal transportation projects.

- Created an interactive, multi-media kiosk on the CMAQ and Transportation Enhancements program which features numerous bicycle and pedestrian projects including Seattle's Spot Improvement Program and the Long Beach Bikestation.

8. Encourage State safety offices to include consideration of bicyclists and pedestrians into their policies and procedures. (FHWA, NHTSA)

Actions: USDOT has

- Created the Pedestrian Safety Roadshow, an interactive workshop to help communities mobilize support for pedestrian safety activities. DOT has sponsored at least 10 workshops and trained more than 150 trainers - who in turn have delivered dozens of Roadshows in communities across the country.
- Published *Traffic Safety Digest: A Compendium of Innovative State and Local Traffic Safety Projects* which includes descriptions of a variety of pedestrian and bicycle safety initiatives.

9. Investigate the collection of use, crash/accident rate, and evaluation data. Develop and test model usage, crash/accident rate, and evaluation methodologies and encourage their use by State and local officials. Assimilate and distribute this information. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Published *Crash Typing in the 90's* reports for both bicycle and pedestrian crashes to update the way in which these crashes are categorized. This in turn helps with the identification of problems and specific countermeasures (1998).
- Developed and tested the PBCAT software to assist State and local crash data gathering and application (1999).
- Updated research into the use of hospital data to capture more accurate levels of bicycle and pedestrian crashes, especially in relation to single person and off-highway crashes (1999).
- Disseminated a *Model User Survey* through the National Bicycle and Pedestrian Clearinghouse to aid agencies wishing to collect bicycle and pedestrian use data (1994).
- Published a *Compendium of Available Bicycle and Pedestrian Trip Generation Data in the United States* (1994).
- Worked with Bureau of Transportation Statistics to develop needs statement for current research into the availability of bicycle and pedestrian data (1998).
- Issued annual Traffic Safety Fact Sheets on bicycle and pedestrian injuries and fatalities.

USDOT still needs to:

- Collect and analyze bicycle and pedestrian exposure data to help determine the impact of safety countermeasures and other actions on bicyclist and pedestrian safety.
- Collect and analyze bicycle and pedestrian use data.

10. Develop prototype seating configurations and hardware to accommodate bicycles on commuter and intercity rail and bus lines. (FTA)

Actions: USDOT has

- Not acted on this item. The ongoing work of Caltrain and other rail providers, and the developers of bicycle racks for buses, has made USDOT's role in this unnecessary.

USDOT still needs to:

- Promote the work of rail and transit providers to the broader transit industry.

11. Encourage liberalized policies by AMTRAK for bicycle carriage on rail. (FTA)

Actions: USDOT has

- Not acted on this item.

USDOT still needs to:

- Identify FRA as the appropriate agency through which to work cooperatively with the railroad industry and address the issue of bicycle carriage on passenger trains.

Action Item 3

Provide funding for a bicycle and pedestrian friendly infrastructure that includes new facilities and infrastructure retrofitting and education for all road users, and enforcement programs for all road users.

1. Actively promote the use of Federal-aid transportation funds for bicycle and pedestrian projects. Follow up to determine the amount of money spent in each State. Publicize the expenditures and funding sources. (FHWA, NHTSA)
2. Actively encourage Section 402 funding to be used on bicycle and pedestrian safety programs. (FHWA, NHTSA)
3. Encourage the use of Title III, Section 25 funds for facilities and programs enhancing multimodal transit trips which include bicycle and pedestrian components. (FTA)
4. Refine and promote educational and enforcement programs for all road users relating to bicyclists and pedestrians. (NHTSA, FHWA, FTA)

USDOT Response to Action Item 3

1. Actively promote the use of Federal-aid transportation funds for bicycle and pedestrian projects. Follow up to determine the amount of money spent in each State. Publicize the expenditures and funding sources. (FHWA, NHTSA)

Actions: USDOT has

- Published *Bicycle and Pedestrian Provisions of the Federal-aid Program* which highlights funding opportunities (1998).
- Circulated program guidance on the bicycle and pedestrian provisions of the Federal transportation program that actively encourages States and MPOs to use the full range of available funding programs to improve conditions for bicycling and walking (1999).
- Ensured that the *Federal Register* Notice announcing the Transportation and Community and System Preservation pilot program actively encouraged bicycle and pedestrian related projects (1998).
- Attended a groundbreaking ceremony for the Metropolitan Branch Trail (DC), a High Priority Project funded under TEA-21 (1998).
- Written the 1999 Public Lands Highways Discretionary Funds solicitation to actively recruit trail projects - resulting in the award of \$11 million for bicycle, pedestrian, and trail projects (1998) - and publicized the results of this solicitation.

- Produced an annual summary of obligated funds for the TE, CMAQ, and STP programs.

USDOT still needs to:

- Improve the way in which the agency tracks expenditures on bicycle and pedestrian projects that are an incidental feature of larger projects.
- Encourage and assist States and MPOs in the speedier implementation of bicycle and pedestrian projects using TEA-21 funds.

2. Actively encourage Section 402 funding to be used on bicycle and pedestrian safety programs. (FHWA, NHTSA)

Actions: USDOT has

- Initiated the Pedestrian Safety Roadshow, a citizen action workshop that has been delivered in more than 50 communities, which focuses on a variety of pedestrian safety programs including those funded by Section 402 State and Community Traffic Safety Program. More than 150 trainers have been trained to deliver the Roadshow.

3. Encourage the use of Title III, Section 25 funds for facilities and programs enhancing multimodal transit trips which include bicycle and pedestrian components. (FTA)

Actions: USDOT has

- Published *Bicycles and Transit: A Partnership that Works* (1998).
- Published *Improving Pedestrian Access to Transit: An Advocacy Handbook* (1998).

USDOT still needs to:

- Provide greater assistance in defining and describing the new Transit Enhancements Program created by TEA-21

4. Refine and promote educational and enforcement programs for all road users relating to bicyclists and pedestrians. (NHTSA, FHWA, FTA)

Actions: USDOT has

- Maintained an active, ongoing program to provide a wide range of literature and resources on bicycle and pedestrian safety programs including:
 - *Prevent Pedestrian Crashes* a program for preschool and elementary school children
 - *Walk Alert: National Pedestrian Safety Program Guide*
 - *Ride Like A Pro* bicycle helmet safety event and brochure
 - *Caminando a Través de los Años*, a three-part Spanish language pedestrian safety program featuring a telenovela, brochures, slide show etc.
 - *What's New About Bicycle Helmets* brochure
 - *10 Smart Routes to Bicycle Safety* booklet
 - *Use Your Head: Before You Buy a Bike Helmet Make Sure it Fits*, poster and flyer
- Initiated work on the TEA-21 mandate to develop a national bicycle safety education curriculum.
- Developed a *Zone Guide for Pedestrian Safety* to provide a systematic, cost-effective way to target pedestrian safety activities.
- Developed a *Bicycle Safety Resource Guide* documenting bicycle safety problem areas and available countermeasures in a matrix format.

Action Item 4.

Provide initial and continuing education and training for planning and engineering professionals which encourages routine consideration of the needs of bicyclists and pedestrians.

1. Refine and continue providing training for transportation officials in field, State, MPO, and local offices on bicycle and pedestrian accommodations and safety. (FHWA, NHTSA)
2. Provide training opportunities and technical assistance to State Department of Transportation bicycle and pedestrian coordinators. (FHWA, NHTSA)
3. Investigate the development of a core bicycle and pedestrian curriculum for inclusion in transportation engineering courses at the undergraduate, graduate, and continuing education levels. (FHWA).
4. Investigate development of a training course on bicyclist and pedestrian facility planning and design. (FHWA)
5. Provide training for local transit officials on designing bicyclist-friendly parking facilities, on-vehicle carriage programs, interfaces for bicyclists and pedestrians with transit, and access features approaching and at transit centers. (FTA, FHWA)

USDOT Response to Action Item 4

1. Refine and continue providing training for transportation officials in field, State, MPO, and local offices on bicycle and pedestrian accommodations and safety. (FHWA, NHTSA)

Actions: USDOT has

- Delivered 40 *Bicycle and Pedestrian Safety and Accommodation* courses through NHI (1996-1998)
 - Initiated development of a bicycle facility design course through the National Highway Institute (1999.)
2. Provide training opportunities and technical assistance to State Department of Transportation bicycle and pedestrian coordinators. (FHWA, NHTSA)

Actions: USDOT has

- Organized 6 annual meetings of the State bicycle and pedestrian coordinators
 - Provided a detailed package of current training opportunities at most recent annual meeting (Sept. 1998)
 - Promoted all NHI bicycle and pedestrian courses through the State DOT bicycle and pedestrian coordinators
 - Facilitated a bi-monthly conference call of the State bicycle and pedestrian coordinators
3. Investigate the development of a core bicycle and pedestrian curriculum for inclusion in transportation engineering courses at the undergraduate, graduate, and continuing education levels. (FHWA).

Actions: USDOT has

- Developed a modular, graduate level bicycle and pedestrian curriculum for inclusion in engineering and planning curriculum (1999). This can also be used as part of undergraduate and continuing education courses.

4. Investigate development of a training course on bicyclist and pedestrian facility planning and design. (FHWA)

Actions: USDOT has

- Begun work through NHI to develop a bicycle facility design training course (1999).
- Offered a three-day *Bicycle and Pedestrian Safety and Accommodation* course through NHI that includes a substantial amount of facility planning and design information.

USDOT still needs to:

- Develop and deliver a pedestrian facility design course.
- Develop and deliver an ADA implementation design course.
- Develop and deliver a course or course materials on pedestrian crossings at railway-highway intersections.

5. Provide training for local transit officials on designing bicyclist-friendly parking facilities, on-vehicle carriage programs, interfaces for bicyclists and pedestrians with transit, and access features approaching and at transit centers. (FTA, FHWA)

Actions: USDOT has

- Not acted on this item.

USDOT still needs to:

- Integrate bicycle and pedestrian integration into American Public Transit Association (APTA) and FTA courses, resources and materials.
- Complete and publish the results of an FRA study into the feasibility of rails-with-trails facilities and their linkage to transit services.

Action Item 5.

Conduct promotional and awareness activities, both to increase the level of bicycling and walking for all trip purposes and to legitimize these travel modes within the transportation system.

1. Coordinate activities of the USDOT with other Federal agencies. Convene regular meetings of representatives of the Federal agencies involved in bicycling and pedestrian issues to develop new programs and to exchange information. (OST, FHWA, NHTSA, FTA)
2. Include specific promotional references to bicycling and walking in speeches, policy documents and regulations, press releases, news articles and other information released to the public. Actively promote and sponsor events such as National Bicycle Month and bicycle and pedestrian conferences. (OST, FHWA, NHTSA, FTA)
3. Conduct briefings for field, State, MPO and local offices on bicycle and pedestrian program issues. Conduct site visits of exemplary programs and pass on information to other localities. (OST, FHWA, NHTSA, FTA)
4. Encourage and coordinate activities to measure the amount of bicycling and walking in the United States and ensure this data is compatible with crash/accident data. (OST, FHWA, NHTSA, FTA)
5. Develop and provide information to transit providers and to potential and actual transit users on multimodal trips including bicycling and walking. (FTA)

6. Implement a national campaign to promote increased and safer use of bicycling and walking. (OST, FHWA, NHTSA, FTA)

USDOT Response to Action Item 5

1. Coordinate activities of the USDOT with other Federal agencies. Convene regular meetings of representatives of the Federal agencies involved in bicycling and pedestrian issues to develop new programs and to exchange information. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Initiated monthly meetings of DOT staff involved in bicycle and pedestrian issues.
- Established a Charter Group on Bicycle and Pedestrian Safety to coordinate and elevate the importance of these issues within NHTSA and FHWA.
- Convened quarterly meetings of a new Interagency Task Force on Bicycling and Walking that has included participation from GSA, EPA, CDC, DOT, DOI, USDA, the Presidents Council on Physical Fitness and Sports, DOD, and local bicycle interest groups.
- Created a Task Force on Rails-with-Trails to coordinate the response and role of FHWA, NHTSA, FRA, OST, and FTA on this emerging issue.
- Co-chaired the National Bicycle Safety Network, a public-private partnership to promote safe bicycling with partners such as the League of American Bicyclists, Centers for Disease Control and Prevention, and Maternal and Child Health Bureau.
- Participated in the Interagency Trails Council meetings hosted by DOI/NPS.
- Developed the Millennium Trails Initiative in partnership with the White House Millennium Council.
- Worked with the U.S. Access Board on sidewalk accessibility and the accessibility of outdoor developed areas.

2. Include specific promotional references to bicycling and walking in speeches, policy documents and regulations, press releases, news articles and other information released to the public. Actively promote and sponsor events such as National Bicycle Month and bicycle and pedestrian conferences. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Sponsored and supported a wide range of national, State and local bicycle and pedestrian conferences including Pro Bike / Pro Walk (1994, 1996, 1998), National Trails Symposium (1994, 1996, 1998), National Rails to Trails Conference (1995), First International Trails and Greenways Conference (1998), LifeSavers (1994, 1995, 1996, 1997, 1998), National Pedestrian Conference (1997), Moving Kids Safely (1996, 1997), National Trails Day (1998, 1999), International Conference on Injury Prevention and Control (1996, 1998), Safety Integration Conference (1999)
- Supported the annual Washington, DC Bike to Work Day.
- Supported the first Earth Force Youth Summit scheduled on May 5, 1999.
- Supported the National Walk Our Children to School Day (1998, 1999).
- Established the Millennium Trails Program to integrate bicycling and walking into the White House Millennium initiative, including a launch by the First Lady on Oct. 5, 1998.
- Written a guest editorial on bicycling issues for Bicycling Magazine, due for publication in the June 1999 issue.

USDOT still needs to:

- Integrate bicycling and walking into USDOT presentations at mainstream transportation conferences such as AASHTO, TRB, ITE, APA, ASCE, APTA, and Railvolution.
- Include references to bicycling and walking in speeches, presentations and other activities that are not just addressed to the bicycling and walking community, but also to the construction, traffic engineering, motor vehicle, trucking, and planning audiences.

3. Conduct briefings for field, State, MPO and local offices on bicycle and pedestrian program issues. Conduct site visits of exemplary programs and pass on information found to other localities. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Published *Improving Conditions for Bicycling and Walking: A Best Practices Report* which captures and disseminates success stories from more than 20 cities and States. (1998)
- Published *Bicycling and Walking in the Nineties and Beyond: Applying Scandinavian Experience to America's Challenges*. (1995)
- Published *FHWA Study Tour for Pedestrian and Bicyclist Safety in England, Germany and The Netherlands*. (1995)
- Included in its on-going research program studies of innovative bicycle facilities and pedestrian applications for ITS technologies. These are expected to be published in 1999.

4. Encourage and coordinate activities to measure the amount of bicycling and walking in the United States and ensure this data is compatible with crash/accident data. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Published *A Compendium of Available Bicycle and Pedestrian Trip Generation Data in the United States* (1994).
- Organized and published the results of a *Bicycle/Pedestrian Trip Generation Workshop* (1996-1998).
- Disseminated model surveys for local and State agencies to use in determining local levels of bicycle use (1995).
- Recently awarded a contract through Bureau of Transportation Statistics to research available bicycle and pedestrian data (1999).
- Developed a nationwide telephone survey on Public Beliefs about Pedestrian and Bicycle Safety and Accommodations, to be carried out in 1999.

USDOT still needs to:

- Establish a reliable method by which to calculate and track the level of use of bicycles and walking.
- Continue studying ways in which to develop a complete picture of bicycle and pedestrian crashes and their causes.

5. Develop and provide information to transit providers and to potential and actual transit users on multimodal trips including bicycling and walking. (FTA)

Actions: USDOT has

- Published *Bicycling and Transit: A Partnership that Works* (1998)
- Published *Improving Pedestrian Access to Transit: An Advocacy Manual*. (1998)

- Studied methods of forecasting nonmotorized trip patterns, including where the two modes are integrated with transit, and prepared a report for publication in 1999.

6. Implement a national campaign to promote increased and safer use of bicycling and walking. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Founded and actively supported the Partnership for a Walkable America (PWA).
- Supported the National Walk Our Child to School Day.
- Sponsored National Trails Day in 1998 and 1999.
- Developed the Pedestrian Safety Roadshow for community leaders.

USDOT still needs to:

- Explore support for a bicycle equivalent of the PWA.
- Champion the cause of bicycling and walking beyond a bicycle and pedestrian audience and ensure that the two modes become a real part of the national dialog on transportation safety and the future of our transportation infrastructure.

Action Item 6.

Carry out activities that increase the safety of bicycling and walking.

1. Encourage the collection of data for evaluating the effectiveness of bicycle and pedestrian safety programs. (OST, FHWA, NHTSA, FTA)
2. Promote and disseminate the results of Section 402 bicycle and pedestrian safety programs. (FHWA, NHTSA)
3. Develop a data collection methodology for bicyclist and pedestrian use estimates and for exposure measures in crash/accident rate calculations. (FHWA, NHTSA)
4. Encourage and actively promote helmet use among bicyclists of all ages. (OST, FHWA, NHTSA, FTA)
5. Investigate bicyclist and pedestrian crashes which do not involve motor vehicles and those which occur off the roadway.
6. Widely promote the use of Walk Alert and other pedestrian safety program materials. (FHWA, NHTSA)
7. Cooperate with other agencies and organizations to develop and promote a Bicycle Safety Program for use at the local level.
8. Collect crash/accident data involving pedestrians, bicyclists, and transit vehicles, develop countermeasures for these crashes/accidents and test these countermeasures. (FTA)

USDOT Response to Action Item 6

1. Encourage the collection of data for evaluating the effectiveness of bicycle and pedestrian safety programs. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Developed the *Pedestrian and Bicycle Crash Analysis Tool (PBCAT)* software.
- Initiated study of pedestrian safety countermeasures in a large urban area (Miami) to determine their impact (1998).
- Published a *Bicycle Safety-related Research Synthesis* (1995).
- Evaluated the Pedestrian Safety Roadshows and Facilitator Training courses to determine their effectiveness and the need for additional follow-up and assistance to communities who have had the Roadshow.

USDOT still needs to:

- Develop an outreach program to promote the benefits of different pedestrian countermeasures as cost-effective solutions to pedestrian crash problems.

2. Promote and disseminate the results of Section 402 bicycle and pedestrian safety programs. (FHWA, NHTSA)

Actions: USDOT has

- Published *Traffic Safety Digest: A Compendium of Innovative State and Local Traffic Safety Projects* which includes descriptions of pedestrian and bicycle safety initiatives.
- Published the *Safety Countermeasures* newsletter and a series of *Traffic Tech Notes* that highlight successful and interesting projects funded with Section 402 money.

3. Develop a data collection methodology for bicyclist and pedestrian use estimates and for exposure measures in crash/accident rate calculations. (FHWA, NHTSA)

Actions: USDOT has

- Created and disseminated a Model Use Survey and included crash and use data collection activities as an element of various on-going research projects.
- Commissioned research through BTS to study current data collection techniques.

USDOT still needs to:

- Complete this task.
- Collect and analyze data related to pedestrian crossings of railroad lines and trespasser activity on railroad corridors.

4. Encourage and actively promote helmet use among bicyclists of all ages. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Co-chaired the National Bicycle Safety Network
- Organized the *Ride Like A Pro* bicycle helmet safety event in conjunction with the National Football League and the Super Bowl (1995-1999)
- Published a range of materials on bicycle helmets including
 - *What's New About Bicycle Helmets*, flyer

- *Use Your Head Before You Buy a Bicycle Helmet*, poster and flyer
- *Be Head Smart*, brochure.

- Provided bicycle helmet demonstrations at the DOT's 30th Anniversary Celebration, to Garrett Morgan Youth, and at local schools.
- Presented a Helmet Initiatives workshop at the International Injury Conference (1998, 1999)

5. Investigate bicyclist and pedestrian crashes which do not involve motor vehicles and those which occur off the roadway.

Actions: USDOT has

- Completed *Development of Pedestrian and Bicyclist Injury Databases to Study Non-roadway and Non-motor vehicle Injury Events* to address this issue. (1999)

6. Widely promote the use of Walk Alert and other pedestrian safety program materials. (FHWA, NHTSA)

Actions: USDOT has

- Developed the Pedestrian Safety Roadshow which has been delivered in more than 50 communities, and trained 155 Roadshow trainers. The Roadshow is seen as a necessary precursor to the implementation of a Walk Alert-type pedestrian safety program.
- Developed a *Pedestrian Reference Set* to provide follow-up materials to communities who have had, or are organizing, a Pedestrian Safety Roadshow.
- Supported *National Walk Our Children to School Day*. (Ongoing)
- Developed a *Pedestrian Safety Toolkit* as a resource for local pedestrian safety coordinators and advocates (1999).
- Produced brochures on *Pedestrian Safety for School Age Children*; *Crossing Advice for Pedestrians*; *The Signs of Safety are Everywhere*; and *Don't have a Blind Spot When it Comes to Walking Safely Near Large Trucks and Buses*.
- Produced a quarterly newsletter to inform USDOT field staff and others about pedestrian funding issues, research reports, success stories, legislation, and other updates.

7. Cooperate with other agencies and organizations to develop and promote a Bicycle Safety Program for use at the local level.

Actions: USDOT has

- Initiated development of a National Bicycle Safety Education Curriculum which will result in as assemblage of available education courses for all age groups.
- Commissioned a compilation of bicycle safety literature, programs, resources etc. with the goal of providing a World Wide Web based resource that can identify education program for any age, any problem, variety of media.
- Worked with Earth Force and the Centers for Disease Control and Prevention to host a Youth Safety Summit to showcase innovative youth projects that promote bicycling and bicycle safety (1999).
- Developed the *Ride Like a Pro Community Handbook* to enable communities to host their own bicycle safety events.

8. Collect crash/accident data involving pedestrians, bicyclists, and transit vehicles, develop countermeasures for these crashes/accidents and test these

countermeasures. (FTA)

Actions: USDOT has

- Initiated a task force and commissioned research to address rails-with-trails issues, one element of this overall action item.

USDOT still needs to:

- Complete this action item.

Action Item 7.

Provide outreach to other government agencies and develop new public/private partnerships to safely increase bicycling and walking usage levels.

1. Initiate contact with other Federal agencies to learn of their efforts relating to bicycling and walking both from a programmatic and from administrative aspects. Work with these agencies to use their resources to promote bicycling and walking, and to integrate consideration of bicycling and walking into their policies and programs where appropriate. (OST, FHWA, NHTSA, FTA)
2. Initiate contact, respond to inquiries, and work cooperatively with public and private organizations committed to promoting bicycling and walking and their safety. (OST, FHWA, NHTSA, FTA)
3. Provide technical information, present briefings, or conduct workshops and conferences as appropriate. (OST, FHWA, NHTSA, FTA)
4. Conduct a workshop to investigate the role of the transit industry in bicycle systems and services. (FTA)
5. Monitor and publicize ongoing projects to show the role of local transit agencies, MPOs, and other local organizations in developing and managing a comprehensive bicycle commuting system. (FTA)

USDOT Response to Action Item 7.

1. Initiate contact with other Federal agencies to learn of their efforts relating to bicycling and walking both from a programmatic and from administrative aspects. Work with these agencies to use their resources to promote bicycling and walking, and to integrate consideration of bicycling and walking into their policies and programs where appropriate. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Established and maintained the Interagency Task Force on Bicycling and Walking.
- Participated in Interagency Trails Council meetings.
- Served on the Regulatory Negotiation Committee on Outdoor Recreation Facilities in cooperation with the U.S. Access Board and numerous public and private groups.
- Co-chaired the National Bicycle Safety Network.
- Been a founding member of Partnership for a Walkable America.
- Hosted two workshops on Rails-with-Trails issues with the railroad industry, safety groups, and trail advocates.
- Co-sponsored a conference with the Centers for Disease Control to Prevent Pediatric Pedestrian Injuries.

- Delivered presentations to numerous conferences and meetings of national associations and government agencies.

2. Initiate contact, respond to inquiries, and work cooperatively with public and private organizations committed to promoting bicycling and walking and their safety. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Supported the Partnership for a Walkable America.
- Published *Improving Conditions for Bicycling and Walking: A Best Practices Report* with the Association of Pedestrian and Bicycle Professionals and the Rails-to-Trails Conservancy (1998).
- Supported numerous conferences, workshops, and events organized by public and private partners.
- Established the National Bicycle and Pedestrian Clearinghouse with Bicycle Federation of America and the Rails-to-Trails Conservancy (RTC) (1994-1998). In 1999, many of these functions and additional responsibilities will be transferred to a new Bicycle and Pedestrian Technical Information Center.
- Established the National Transportation Enhancements Clearinghouse with RTC (1996-present).

3. Provide technical information, present briefings, or conduct workshops and conferences as appropriate. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Presented bicycle and pedestrian information at numerous international, national, State, and local conferences, meetings, and workshops.
- Briefed the USDOT Secretary, modal Administrators, and members of Congress on bicycle and pedestrian issues.

4. Conduct a workshop to investigate the role of the transit industry in bicycle systems and services. (FTA)

Actions: USDOT has

- Not acted on this item.

USDOT still needs to:

- Complete this action item

5. Monitor and publicize ongoing projects to show the role of local transit agencies, MPOs, and other local organizations in developing and managing a comprehensive bicycle commuting system. (FTA)

Actions: USDOT has

- Not acted on this item.

USDOT still needs to:

- Complete this action item.

Action Item 8.

Conduct research and develop effective methods of technology transfer.

1. Coordinate Federal research activities both within and outside of the USDOT and make recommendations for studies as appropriate. (OST, FHWA, NHTSA, FTA)
2. Continue research activities relating to the safety of bicycling and walking. (FHWA, NHTSA, FTA)
3. Conduct research into promoting the use of bicycling and walking, and measuring the effectiveness of such programs. (FHWA, NHTSA, FTA)
4. Actively investigate existing technology transfer activities (such as the FHWA Local Technical Assistance Program, National Highway Institute, FHWA Office of Technology Applications, and the NHTSA Regional Operations Program) and utilize them where appropriate. Where needed, develop new technology transfer activities.
5. Conduct a workshop to investigate the shortcomings of traditional technology transfer activities relating to bicyclists and pedestrians. Develop solutions and recommend their implementation in the DOT agencies. (OST, FHWA, NHTSA, FTA)
6. Identify means and provide resources to translate appropriate research and other bicyclist/pedestrian literature from foreign language sources. (OST, FHWA, NHTSA, FTA)
7. Investigate the quantification of the projected reductions in emissions as a result of provisions for bicyclists and pedestrians in air quality nonattainment areas. (OST, FHWA)
8. Establish a national nonmotorized transportation center and clearinghouse. (OST, FHWA, NHTSA, FTA)
9. Conduct research on patronage estimation and mode split modeling for bicycle and pedestrian services and facilities. (FTA)

USDOT Response to Action Item 8

1. Coordinate Federal research activities both within and outside of the USDOT and make recommendations for studies as appropriate. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Completed a 5-year Bicycle and Pedestrian Research Program featuring 16 major areas of research. A complete description of the research projects is included as an appendix.
- Developed an annual list of research priorities within FHWA
- Served as a co-chair of the TRB Committee on Bicycling Research Needs Sub-committee to develop research problem statements; had numerous staff serving on the TRB Bicycling and Pedestrian committees.
- Established a Research Committee of the Interagency Task Force on Bicycling and Walking (1999)

USDOT still needs to:

- Participate in the development of a coordinated national research agenda to address critical bicycle and pedestrian research needs.
2. Continue research activities relating to the safety of bicycling and walking. (FHWA, NHTSA, FTA)

Actions: USDOT has

- Completed tasks under the research project above.
- Initiated a major research study of pedestrian safety countermeasures in a large urban area (1998).
- Begun investigating a three year research study of trail/roadway intersections.
- Initiated research on bicycle conspicuity.
- Initiated a literature review on Vehicle Travel Speeds and Pedestrian Injuries.
- Undertaken the development, implementation and evaluation of a countermeasures program for impaired pedestrians.
- Initiated research into the feasibility of rails-with-trail projects.
- Tested and developed the "Zone Approach" to targeting pedestrian safety improvements.

USDOT still needs to:

- Identify more research funding within the Department to meet the on-going research needs in the bicycle and pedestrian area.

3. Conduct research into promoting the use of bicycling and walking, and measuring the effectiveness of such programs. (FHWA, NHTSA, FTA)

Actions: USDOT has

- Not acted on this item.

USDOT still needs to:

- Complete this action item.

4. Actively investigate existing technology transfer activities (such as the FHWA Local Technical Assistance Program, National Highway Institute, FHWA Office of Technology Applications, and the NHTSA Regional Operations Program) and utilize them where appropriate. Where needed, develop new technology transfer activities.

Actions: USDOT has

- The National Highway Institute (NHI) has worked with FHWA and NHTSA to develop bicycle and pedestrian courses and to review bicycle and pedestrian research products.
- The Office of Technology Applications (since renamed the Office of Technology Evaluation and Deployment) has trained more than 150 instructors for the Pedestrian Safety Roadshows, created the Pedestrian Reference Set, and has worked collaboratively with FHWA and NHTSA to promote and use a variety of bicycle and pedestrian products.
- FHWA's International Technology Scanning Program has sponsored two study tours and published two reports on European initiatives to improve bicycle and pedestrian use and safety.
- All agencies have started taking full advantage of the World Wide Web to make information widely available.

5. Conduct a workshop to investigate the shortcomings of traditional technology transfer activities relating to bicyclists and pedestrians. Develop solutions and

recommend their implementation in the DOT agencies. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- The technology transfer element of the multi-year Pedestrian and Bicycle Safety Research project included two workshops to gather public input into the appropriate technology and content to provide.
- The World Wide Web site proposed as a result of these meetings and research activities is under development and should be available in October 1999.

6. Identify means and provide resources to translate appropriate research and other bicyclist/pedestrian literature from foreign language sources. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Provided access to international research and experience that would not otherwise have been available through a Scanning Tour of European countries (1994-1995).
- Commissioned research summaries from six countries as part of an investigation of innovative bicycle facility treatments (1995).
- Commissioned research summaries from five countries as part of an investigation of innovative pedestrian facility treatments (1997).

USDOT still needs to:

- Identify a mechanism to translate key documents from languages such as German, Danish, Japanese and Dutch into English.

7. Investigate the quantification of the projected reductions in emissions as a result of provisions for bicyclists and pedestrians in air quality nonattainment areas. (OST, FHWA)

Actions: USDOT has

- Not acted on this item.

USDOT still needs to:

- Complete this research.

8. Establish a national nonmotorized transportation center and clearinghouse. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Established the National Bicycle and Pedestrian Clearinghouse in 1994. The NBPC developed a series of fact sheets and disseminated thousands of USDOT publications. FHWA support for the Clearinghouse ceased in 1998.
- Reviewed applications for the TEA-21-mandated Bicycle and Pedestrian Safety Grant to establish a Technical Information Center, develop and disseminate bicycle and pedestrian materials, techniques and strategies. The contract will be awarded in the Spring of 1999.
- Established the National Transportation Enhancements Clearinghouse in 1996.

9. Conduct research on patronage estimation and mode split modeling for bicycle and pedestrian services and facilities. (FTA)

Actions: USDOT has

- Not acted on this item.

USDOT still needs to:

- Complete this research.

Action Item 9.

Serve as positive national presence and role model.

1. Offer and provide technical information within the agencies of the USDOT, their field offices, and outside the agency as appropriate. (OST, FHWA, NHTSA, FTA)
2. Encourage the use of bicycling and walking as agency policy. (OST, FHWA, NHTSA, FTA)
3. Present bicycling and walking as legitimate transportation options in speeches and other public communications. (OST, FHWA, NHTSA, FTA)
4. Participate in national and regional conferences to promote bicycling and walking. (OST, FHWA, NHTSA, FTA)
5. Assimilate examples of successful projects and promotion programs for distribution. (OST, FHWA, NHTSA, FTA)

USDOT Response to Action Item 9.

1. Offer and provide technical information within the agencies of the USDOT, their field offices, and outside the agency as appropriate. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Undertaken a wide variety of activities both internally and externally to offer and provide technical information on bicycle and pedestrian issues. These actions are detailed throughout the response to the preceding eight action items.
2. Encourage the use of bicycling and walking as agency policy. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Actively participated in the annual bike to work event in Washington, DC.
- Drafted an Executive Order on Managing Federal Workforce Transportation that encourages employees and visitors to walk and bicycle as a means of commuting.

USDOT still needs to:

- Ensure the planning, design and operation of DOT buildings and facilities (including any new headquarters building) provides access for people with disabilities; promotes bicycling and walking by employees, contractors and visitors; and contributes to the livability of the surrounding community.
3. Present bicycling and walking as legitimate transportation options in speeches and other public communications. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Included bicycling and walking in speeches of senior administration officials (Secretary, Deputy Secretary, Associate Deputy Secretary, Modal Administrators) at conferences and meetings on bicycle and pedestrian related topics.
- Developed display materials and events (e.g. Walk Our Children to School Week) that represent bicycling and walking as legitimate transportation modes.

4. Participate in national and regional conferences to promote bicycling and walking. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Supported a wide range of national, State and regional conferences with sponsorship, promotion, and speakers. These have included bicycle and pedestrian conferences, trail and greenway conferences and symposia, transportation safety conferences, and bicycle and pedestrian tracks within other national conferences.

5. Assimilate examples of successful projects and promotion programs for distribution. (OST, FHWA, NHTSA, FTA)

Actions: USDOT has

- Published *Improving Conditions for Bicycling and Walking: A Best Practices Report*. 1998.
- The 1998 Excellence in Highway Design awards recognized a number of bicycle and pedestrian related projects including the Historic Columbia River Highway State Trail (OR), the Pen Yan Main Street Bridge (NY), the Grasshopper bridge (AZ) and the Assateague Island Pedestrian bridge (MD).
- Published *More than Asphalt, Concrete and Steel*, a report which recognizes bicycle and pedestrian improvements in Port of Kalama, WA; Puerto Rico; and Chicago, IL.
- Distributed *Traffic Safety Digest: A Compendium of Innovative State and Local Traffic Safety Programs*.
- Initiated a *Compendium of Research in Pedestrian and Bicycle Safety* (1999).



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APPENDIX 2

Bicycle and Pedestrian Related Publications and Reports Produced by USDOT (Since 1994)

1. National Bicycling and Walking Study Reports

FINAL REPORT

FHWA-PD-94-023 NATIONAL BICYCLING AND WALKING STUDY

CASE STUDIES:

FHWA-PD-92-041 #1 Reasons why Bicycling & Walking are not being used

FHWA-PD-92-038 #2 The Training Needs of Transportation Professionals

FHWA-PD-93-039 #3 What Needs to be Done to Promote Bicycling and Walking

FHWA-PD-93-031 #4 Measures to Overcome Impediments to Bicycling and Walking

FHWA-PD-93-008 #5 An Analysis of Current Funding Mechanisms

FHWA-PD-93-024 #6 Analysis of Successful Grass-Roots Movements

FHWA-PD-92-040 #7 Transportation Potential and Other Benefits of Off-Road Facilities
FHWA-PD-93-007 #8 Organizing Citizen Support and Acquiring Funding
FHWA-PD-93-012 #9 Linking Bicycle/Pedestrian Facilities with Transit
FHWA-PD-94-012 #10 Trading Off Among the Needs of Motor Vehicle Users, Peds, Bikes
FHWA-PD-93-009 #11 Balancing Engineering, Education, Law Enforcement, Encouragement
FHWA-PD-92-036 #12 Incorporating Consideration of Bicyclists & Pedestrians into Education
FHWA-PD-93-018 #13 A Synthesis of Existing Bicyclist and Pedestrian Related Laws
FHWA-PD-93-025 #14 Benefits of Bicycling and Walking to Health
FHWA-PD-93-015 #15 The Environmental Benefits of Bicycling and Walking
FHWA-PD-92-037 #16 A Study of Bicycle and Pedestrian Programs in European Countries
FHWA-PD-93-016 #17 Bicycle/Pedestrian Policies and Programs in Asia, Australia, New Z.
FHWA-PD-93-010 #18 Analyses of Successful Provincial, State, and Local Programs
FHWA-PD-93-028 #19 Traffic Calming, Auto Restricted Zones, and Traffic Management
FHWA-PD-93-037 #20 The Effects of Environmental Design on the Amount and Type
FHWA-PD-93-017 #21 Incorporating Bicycle and Pedestrian Considerations into Planning
FHWA-PD-93-019 #22 The Role of State Bicycle/Pedestrian Coordinators
FHWA-PD-93-014 #23 The Role of Local Bicycle/Pedestrian Coordinators
FHWA-PD-93-006 #24 Current Planning Guidelines and Design Standards

2. Other FHWA Reports

FHWA-PD-97-053 Bicycle and Pedestrian Planning Under ISTEA
FHWA-PD-98-049 Bicycle and Pedestrian Provisions of the Federal-aid Program (brochure)
FHWA-RD-95-163 Bicycle and Pedestrian Crash Types of the Early 1990s
FHWA-HI-94-028 Bicycle and Pedestrian Planning (participant book)
FHWA-PL-95-005 Bicycling and Walking in the Nineties and Beyond: Applying Scandinavian Experience to America's Challenges
FHWA-RD-94-062 Bicycle Safety Related Research Synthesis
FHWA-PD-95-025 Bike to Work in the DC Area: Safety Tips, Rules & Specific Laws
FHWA-PD-95-009 A Compendium of Available Bicycle and Pedestrian Trip Generation Data
FHWA-PD-94-0/31 Conflicts on Multiple-Use Trails
FHWA-PL-95-006 FHWA Study Tour for Pedestrian and Bicyclists Safety in England, Germany, and the Netherlands
FHWA-RD-98-105 Implementing Bicycle Improvements at the Local Level
FHWA-HI-96-028 Pedestrian and Bicyclist Safety and Accommodation (participant book)
Improving Conditions for Bicycling and Walking: A Best Practices Report (1998). Produced with Rails-to-Trails Conservancy and Association of Pedestrian and Bicycle Professionals.
FHWA-RD-98-072 The Bicycle Compatibility Index: A Level of Service Concept, Final Report
FHWA-RD-98-095 The Bicycle Compatibility Index: A Level of Service Concept, Implementation Manual
FHWA-SA-98-065 Pedestrian Safety for School-age Children

3. NHTSA Reports and Publications

DOT-HS-808 607 Prevent Bicycle Crashes (fact sheet)
DOT-HS-808 000 Your Bicycle Helmet - A Correct Fit (brochure)
DOT-HS-808 648 Ride Like A Pro (brochure)
DOT-HS-808 763 10 Smart Routes to Bicycle Safety (booklet)
DOT-HS-808 781 Be Head Smart - It's Time to Start (brochure)
DOT-HS-808 746 What's New About Bicycle Helmets? (poster)
DOT-HS-808 747 What's New About Bicycle Helmets? (brochure)
DOT-HS-808 757 What's New About Bicycle Helmets? (flyer)

DOT-HS-808 754 Back to School Safely (booklet)
You and You Should Never Meet Like This (flyer)
Compendium of Pedestrian Safety Tips (flyer)
Kids Guide to Safe Walking (brochure)
Walkability Checklist (brochure, English and Spanish))
Caminando a Través de los Años - Seguridad Para Peatones de Tercera Edad (report, slide show, presenters guide, telenovela)
Caminando a Través de los Años - Common Childhood Pedestrian Risks (telenovela, bilingual brochure)

4. FTA Reports and Publications

Bicycles and Transit: A Partnership that Works (booklet)
Improving Pedestrian Access to Transit (report/manual)



APPENDIX 3

USDOT Bicycle and Pedestrian Related Research

1. FHWA Multi-year Research Program Activities (1994-1999)

- Development of Pedestrian and Bicyclist Injury Databases
- Development of National Pedestrian Safety Awareness Campaign (w/NHTSA)
- Development of Planning Guidelines and Training Courses (includes planning guides, planning training course, and university graduate-level course)
- Development of Bicycle Compatibility Index: A Level of Service Concept
- Bicycle Facilities Evaluation (analysis of bicycle lanes versus wide curb lanes)
- Capacity Analysis of Pedestrian and Bicyclist Facilities
- Development and Test of Bicycle Safety Countermeasures (NHTSA)
- Synthesis of Bicycle and Pedestrian Planning at the State and MPO Levels
- Evaluation of Pedestrian Facilities (includes synthesis, research report, and users guide)
- Evaluation of the Effectiveness of 3D/4D Visualization
- ITS Applications for Pedestrian Safety
- Guidebook on Quantitative Methods to Estimate Nonmotorized Travel
- Pedestrian and Bicycle Crash Analysis Tool
- Evaluation of Intersection Treatments for Pedestrians
- Evaluation of Ultraviolet Headlamps
- Pedestrian and Bicyclist Technology Transfer Study

2. Current NHTSA Research Initiatives

- Pedestrian Research Compendium
- Survey on Public Beliefs about Pedestrian and Bicyclist Safety and Accommodation
- Literature Review: Vehicle Travel Speeds and Pedestrian Injury
- Literature Review on Pedestrian and Bicyclist Conspicuity
- Beta-testing of the Pedestrian and Bicyclist Crash Analysis Tool
- Development, Implementation and Evaluation of a Countermeasures Program for Alcohol impaired Pedestrians

- Large City Demonstration and Evaluation of Pedestrian Countermeasures
- Zone Guide for Pedestrian Safety
- Bicyclist Research Compendium
- Bicycle Safety Resource Guide
- Enhancing the Detection/Recognition of Bicycles

3. Current FRA Research Initiatives

- Best Practices Analysis of Rails with Trails

4. Other Current Research Initiatives

- National Bicycle Education Curriculum (FHWA, NHTSA)
- Designing Sidewalks and Trails for Access

To provide Feedback, Suggestions, or Comments for this page contact Gabe Rousseau at gabe.rousseau@dot.gov.

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